APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/718,924	11/22/2000	Timothy Roy Block	ROC9-2000-0123-US1	2147

46296	7590	05/02/2005

MARTIN & ASSOCIATES, LLC
IBM INTELLECTUAL PROPERTY LAW DEPARTMENT
DEPARTMENT 917, BUILDING 006-1
3605 HIGHWAY 52 NORTH
ROCHESTER, MN 55901-7829

EXAMINER
EDELMAN, BRADLEY E

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
		09/718,924	BLOCK, TIMOTHY ROY
Office Action Summary		Examiner	Art Unit
		Bradley Edelman	2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 January 2005_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _22 November 2000_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _3/4/05_.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This Office action in response to Applicant's amendment and request for

continued examination filed on January 28, 2005. Claims 1-20 are presented for

examination. Claims 1, 4, 6, and 9 have been amended.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

1. Claims 9, 11, 12, and 19 are rejected under 35 U.S.C. 101 because they are

directed to non-statutory subject matter. Note that these claims permit the claimed

"program product comprising a computer program" to be a signal on a carrier wave

(as claimed, a "signal bearing media" that comprises a "transmission media" – see

claims 1 & 11). A signal does not fall into one of the four statutory categories of a

process, machine, manufacture, or composition of matter. Therefore, claims 9, 11,

12, and 19 are non-statutory.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section

351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being unpatentable over

Hamilton et al. (U.S. Patent No. 6,392,993, hereinafter "Hamilton").

In considering claim 1, Hamilton discloses an apparatus comprising:

At least one processor (inherent), a memory coupled to the at least one

processor (inherent), and a network interface (inherent) that couples the apparatus to a

plurality of other computer systems (col. 27, line 33-40, "sending system 196"), wherein

the apparatus and the plurality of other computer systems form a cluster of computers

that cooperate via ordered messages to perform a task (col. 5, lines 55-60, "the

invention may also be practiced in distributed computing environments where tasks are

performed by remote processing devices that are linked through a communications

network"; col. 27, lines 53-54, describing that each message (the messages in Hamilton

are actually portions of messages, called "packets") has "sequence numbers"); and

A cluster communication mechanism residing in the memory and executed by the

at least one processor (inherent to allow the master to communicate with the other

computer systems in the group), the cluster communication mechanism including a

sliding send window that communicates at least one ordered message to a plurality of

the other computer systems without waiting for an acknowledge message from any of

the plurality of other computer systems before sending out the next ordered message

(col. 27, lines 51-65, describing that a group of messages within a window size are sent

to the recipients before an acknowledgment for the group is received).

In considering claim 2, Hamilton further discloses that each ordered message

includes a header with information ("ACK request flag") that indicates whether an

acknowledge message for the ordered messages may be delayed and grouped with at

least one subsequent acknowledge message (col. 27, lines 54-65, "ACK request flag is

set on every Nth packet... [which] lets sending system 196 know with certainty that all of

the packets of the ACK window were received").

In considering claim 3, Hamilton further discloses that the acknowledge message

acknowledges from one to a plurality of ordered messages ("N" can be set to any

number).

In considering claim 4, Hamilton discloses a networked computer system

comprising:

A cluster of computer systems that cooperate via ordered messages to perform a

task (col. 5, lines 55-60; col. 27, lines 53-54), wherein each computer system includes:

A network interface that couples each computer system via a network to other

computer systems in the cluster, and a memory (all inherent in the receiving systems);

and

A cluster communication mechanism residing in the memory, the cluster

communication mechanism enforcing execution of a plurality of received messages in

the order the plurality of received messages were received, the cluster communication

mechanism including a sliding send window that communicates at least one ordered

message to a plurality of other computer systems without waiting for an

acknowledgment from any of the plurality of other computer systems before sending out

the next ordered message (col. 27, lines 51-65, describing that a group of messages

within a window size are sent to the recipients before an acknowledgment for the group

is received).

In considering claim 5, Hamilton further discloses that each ordered message

includes a header with information ("ACK request flag") that indicates whether an

acknowledge message for the ordered messages may be delayed and grouped with at

least one subsequent acknowledge message (col. 27, lines 54-65, "ACK request flag is

set on every Nth packet... [which] lets sending system 196 know with certainty that all of

the packets of the ACK window were received").

In considering claim 6, Hamilton discloses a computer-implemented method for

processing a task in a clustered computing environment, the method comprising the

steps of:

Providing a cluster communication mechanism executing on a first computer

system in a cluster wherein the computers in the cluster cooperate via ordered

messages to perform the task and wherein the cluster communications mechanism

includes a sliding send window that communicates at least one ordered message to a

plurality of other computer systems in the cluster without waiting for an acknowledgment

from each computer system in the cluster that received an ordered message before

sending out the next ordered message (col. 5, lines 55-60, "the invention may also be

practiced in distributed computing environments where tasks are performed by remote

processing devices that are linked through a communications network"; col. 27, lines

53-54, describing that each message (the messages in Hamilton are actually portions of

messages, called "packets") has "sequence numbers");

The cluster communication mechanism sending a first ordered message to a first

plurality of other computer systems in the cluster; and

The cluster communication mechanism sending a second ordered message to a

second plurality of other computer systems in the cluster without waiting for a response

to the first ordered messages from each of the first plurality of other computer systems

in the cluster (col. 27, lines 51-65, describing that a group of messages within a window

size are sent to the recipients before an acknowledgment for the group is received).

In considering claim 7, Hamilton further discloses that at least one of the first

plurality of other computer system in the cluster responds to the first and second

ordered messages by sending a single acknowledge message to the cluster

communication mechanism that acknowledges both the first and second ordered

messages (col. 27, lines 54-65, "ACK request flag is set on every Nth packet... [which]

lets sending system 196 know with certainty that all of the packets of the ACK window

were received").

In considering claim 8, Hamilton further discloses that the first and second ordered messages each include a header with information (i.e. no "ACK request flag") that indicates whether an acknowledge messages for the first and second ordered messages may be delayed and grouped with at least one subsequent acknowledge message (col. 27, lines 54-65, "ACK request flag is set on every Nth packet... [which] lets sending system 196 know with certainty that all of the packets of the ACK window were received").

In considering claim 9, Hamilton discloses a program product comprising a computer program comprising:

A cluster communication mechanism that includes a sliding send window that communicates at least one ordered message to a plurality of other computer systems in a cluster system that cooperate via ordered messages to perform a task without waiting for an acknowledge message from any of the plurality of other computer systems before sending out the next ordered message (col. 5, lines 55-60, "the invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network"; col. 27, lines 53-54, describing that each message (the messages in Hamilton are actually portions of messages, called "packets") has "sequence numbers"; col. 27, lines 54-65, "ACK request flag is set on every Nth packet... [which] lets sending system 196 know with certainty that all of the packets of the ACK window were received"); and

Computer-readable signal bearing media bearing the computer program

(inherent).

In considering claim 10, Hamilton further discloses that the signal bearing media

comprises recordable media (inherent).

In considering claim 11, Hamilton further discloses that the signal bearing media

comprises transmission media (inherent).

In considering claim 12, Hamilton further discloses that the first and second

ordered messages each include a header with information (i.e. no "ACK request flag")

that indicates whether an acknowledge messages for the first and second ordered

messages may be delayed and grouped with at least one subsequent acknowledge

message (col. 27, lines 54-65, "ACK request flag is set on every Nth packet... [which]

lets sending system 196 know with certainty that all of the packets of the ACK window

were received").

In considering claims 13, 17, and 19, Hamilton further discloses that the ordered

message is communicated to the plurality of other computer systems via IP multicast

("IP multicast," col. 12, lines 41-42).

In considering claims 14, 18, and 20, Hamilton further discloses that the communication mechanism enforces execution of a plurality of received messages in the order the plurality of received messages were received (i.e. it doesn't wait for any acknowledgments, but just processes the messages as they are received).

In considering claim 15, Hamilton further discloses that the first plurality of computers includes all computers systems in the second plurality of computers systems (the multicast messages are sent to the same multicast group of recipients).

In considering claim 16, Hamilton further discloses that the first plurality of computer systems comprises the second plurality of computer systems (the multicast messages are sent to the same multicast group of recipients).

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley Edelman whose telephone number is 571-272-3953. The examiner can normally be reached from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached at 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BE
April 26, 2005